

BEFORE THE  
**Federal Communications Commission**

WASHINGTON, D.C. 20554

RECEIVED

SEP 1 1995

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of )  
Amendment of Parts 22, 90 and 94 )  
of the Commission's Rules to )  
Permit Routine Use of )  
Signal Boosters )

WT Docket No. 95-70

To: The Commission

DOCKET FILE COPY ORIGINAL

REPLY COMMENTS  
OF  
TX RX SYSTEMS, INC.

TX RX Systems, Inc. ("TX RX"), by its attorneys and pursuant to Section 1.415 of the Rules and Regulations of the Federal Communications Commission ("Commission" or "FCC"), hereby respectfully submits these Reply Comments in response to the Comments filed in the instant proceeding on August 14, 1995 that addressed issues raised in the Commission's Notice of Proposed Rule Making ("Notice").<sup>1/</sup>

REPLY COMMENTS

1. TX RX congratulates the Commission for proposing rule changes that recognize that signal boosters do not extend the originally transmitted signal beyond the

---

<sup>1/</sup> 60 Fed. Reg. 33782 (June 29, 1995). The dates for filing Comments and Reply Comments were extended to August 14, 1995 and September 1, 1995, respectively, by Order of the Commission. 60 Fed. Reg. 36772 (July 18, 1995).

No. of Copies rec'd  
List A B C D E

029

previously established service area. TX RX fully supports these proposed rule changes since they would permit licensees to provide coverage to areas where the normal, non-boosted signal is obstructed.<sup>2/</sup> TX RX joins with the many participants in this proceeding who expressed similar views in support of the Commission's proposal to enable them to better serve their authorized service areas through the routine use of signal boosters.<sup>3/</sup>

2. TX RX similarly concurs with those participants who expressed their concern that the proposed 500 milliwatt limit on total output power of a signal booster would be unnecessarily restrictive.<sup>4/</sup> For example, Andrew Corporation and RAM Mobile Data USA stated in their comments that licensees currently use signal boosters which are higher powered than 500 milliwatts; and, in fact, demand for these strong signal boosters is so great that 500 milliwatt

---

<sup>2/</sup> Notice at ¶¶ 5, 6.

<sup>3/</sup> See, e.g., Allen Telecom Group at 1; Andrew Corporation at 2; Arch Communications and Airtouch Paging at 3; Celwave at 3; Motorola at 2; Telecommunications Industries Association at 1, 3; UTC at 3.

<sup>4/</sup> Allen Telecom Group at 1-2; Andrew Corporation at 5; Arch Communications and Airtouch Paging at 8; Celwave at 3; Motorola at 2, 4; Telecommunications Industries Association (TIA) at 1, 3; UTC at 3.

signal boosters are not produced.<sup>5/</sup> As a signal booster manufacturer, TX RX has similar experiences to report. TX RX currently does not manufacture signal boosters with 500 milliwatt output power limitations simply because customers demand greater output power potential in order to adequately cover their service areas.

3. TX RX agrees with Celwave and TIA that the Commission's proposal to reduce interference by limiting signal booster output power would, in practice, lead to an increase in overall noise and interference potential. For example, Celwave and TIA both noted that the proposed 500 milliwatt output power limit would force licensees to install a greater number of signal boosters in order to fill in the dead spots in their coverage areas. This increase in the number of signal boosters would, in turn, lead to a higher level of noise and greater potential for interference than if fewer signal boosters, operating at higher individual output power levels, were placed in operation by the licensees.<sup>6/</sup> Thus, TX RX reiterates its belief that the proposed output power limit of 500 milliwatts is unwarranted.

---

<sup>5/</sup> Andrew Corporation at 5; RAM Mobile Data USA at 4.

<sup>6/</sup> Celwave at 5; TIA at 4.

4. In fact, TX RX urges the Commission not to place any output power limits on Class A or Class B signal boosters. The Commission's rules already stipulate that signal boosters must be FCC type-accepted to the same standards as base station transmitters. Thus, as long as the output of Class A or Class B signal boosters remains in compliance with the Commission's spurious emission and occupied bandwidth standards, licensees will ensure that the system coverage area is within authorized limits and signal boosters do not cause interference with other users.

5. TX RX believes that Hewlett Packard ("HP") overstated the potential for harmful interference to medical telemetry systems from the use of signal boosters in the 450-470 MHz band.<sup>7/</sup> In fact, HP urged the Commission to entirely prohibit operation of Class B boosters in the 450-470 MHz band and to require waivers for use of Class A boosters in the band.<sup>8/</sup> Signal boosters must maintain the same spurious output limits as transmitters; yet, HP does not maintain that transmitters will cause a problem to

---

<sup>7/</sup> HP at 1.

<sup>8/</sup> HP at 2.

medical telemetry equipment. Furthermore, UHF high-powered paging transmitters constantly operate in the 450-470 MHz band. HP does not seem concerned that they will negatively impact medical telemetry devices. TX RX believes that the likelihood of harmful interference to medical telemetry devices from signal boosters is, therefore, greatly overstated by HP. Signal boosters merely retransmit authorized signals, they do not modify those signals. Thus, TX RX believes that restrictions on use of signal boosters in the 450-470 MHz band are entirely unnecessary.

6. Nevertheless, should the Commission conclude otherwise, TX RX believes that Spacelabs Medical, Inc. ("Spacelabs") proposed a more appropriate remedy than Motorola. Specifically, Spacelabs proposed that licensees planning to install a signal booster in the 450-470 MHz band should first give sixty days advance notice to area hospitals and health care facilities.<sup>2/</sup> TX RX opposes, however, Spacelabs' proposal to require approval by the hospitals and health care organizations. If the signal boosters are type-accepted to comply with the same requirements as radio transmitters in that frequency range, then no additional approval should be needed. Otherwise,

---

<sup>2/</sup> Spacelabs at 8.

base stations, repeaters and other transmitters would all need prior hospital authorizations. While TX RX reiterates its belief that signal boosters authorized in the 450-470 MHz band pose absolutely no threat to medical telemetry devices, should the Commission conclude otherwise, TX RX believes that a system of notification would be more appropriate than outright prohibition from the entire 450-470 MHz band.

7. TX RX agrees with the Commission that registration or licensing is unnecessary and burdensome to licensees. Thus, TX RX fully supports the Commission's proposal to permit licensees to employ signal boosters in order to penetrate structures or other obstacles within the area customarily served by the licensee's system without requiring the licensee to obtain specific authorization from the Commission to operate such signal boosters.

8. TX RX urges the Commission to specifically permit routine use of signal boosters for Part 22 VHF paging operations. While the Commission proposed to permit routine use of signal boosters in Part 22 common carrier paging operations in the band 931-932 MHz, signal boosters also play an important role in Part 22 paging operations in the VHF region. Thus, TX RX urges the Commission to incorporate

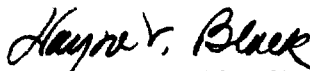
Part 22 VHF paging operations into its proposed rule changes. See, 47 C.F.R. § 22.531.

WHEREFORE, THE PREMISES CONSIDERED, TX RX Systems, Inc. respectfully submits the foregoing Reply Comments and urges the Federal Communications Commission to act in a manner consistent with the views expressed herein.

Respectfully submitted,

TX RX SYSTEMS, INC.

By:



Wayne V. Black  
John Reardon  
Keller and Heckman  
1001 G Street  
Suite 500 West  
Washington, D.C. 20001  
(202) 434-4100

Its Attorneys

Dated: September 1, 1995